Amendments to the Claims

Please amend Claims 14, 17-21, and 24-28. Please add new Claims 34-44. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

Claims 1-13 (Cancelled).

14. (Currently Amended) A method for processing filter tap coefficients in an echo canceller, comprising:

adapting high-energy filter tap coefficients and low-energy filter tap coefficients ~~when~~ using adjustable gain constants, based on an occurrence of a first predetermined condition ~~occurs~~; and

separately adapting the high-energy filter tap coefficients from the low-energy filter tap coefficients ~~when~~ based on an occurrence of a second predetermined condition ~~occurs~~.

15. (Previously Presented) The method of Claim 14, wherein separately adapting the high-energy filter tap coefficients from the low-energy filter tap coefficients comprises adapting the high-energy filter tap coefficients with a first gain constant and adapting the low-energy filter tap coefficients with a second gain constant.

16. (Previously Presented) The method of Claim 15, wherein the first gain constant is greater than the second gain constant.

17. (Currently Amended) The method of Claim 14, wherein the first predetermined condition is an existence of a non-linear echo response path ~~scenario~~.

18. (Currently Amended) The method of Claim 14, wherein the first predetermined condition is an existence of a data call ~~scenario~~.

19. (Currently Amended) The method of Claim 14, wherein the first predetermined condition is an existence of a narrow bandwidth signal ~~scenario~~.

20. (Currently Amended) The method of Claim 14, wherein the second predetermined condition is convergence to a linear echo path ~~scenario~~.

21. (Currently Amended) A computer-readable medium, containing a set of instructions for execution by a processor, the instructions comprising:

adapting high-energy filter tap coefficients and low-energy filter tap coefficients ~~when~~ using adjustable gain constants, based on an occurrence of a first predetermined condition ~~occurs~~; and

separately adapting the high-energy filter tap coefficients from the low-energy filter tap coefficients ~~when~~ based on an occurrence of a second predetermined condition.

22. (Previously Presented) The computer-readable medium of Claim 21, wherein separately adapting the high-energy filter tap coefficients from the low-energy filter tap coefficients comprises adapting the high-energy filter tap coefficients with a first gain constant and adapting the low-energy filter tap coefficients with a second gain constant.

23. (Previously Presented) The computer-readable medium of Claim 22, wherein the first gain constant is greater than the second gain constant.

24. (Currently Amended) The computer-readable medium of Claim 21, wherein the first predetermined condition is an existence of a non-linear echo response path ~~scenario~~.

25. (Currently Amended) The computer-readable medium of Claim 21, wherein the first predetermined condition is an existence of a data call ~~scenario~~.

26. (Currently Amended) The computer-readable medium of Claim 21, wherein the first predetermined condition is [[a]] an existence of a narrow bandwidth signal ~~scenario~~.

27. (Currently Amended) The method of Claim 21, wherein the second predetermined condition is convergence to a linear echo path ~~scenario~~.

28. (Currently Amended) A method for searching for filter taps for adaptation, comprising:
searching for a first group of filter taps associated with a first energy level;
biasing a group of filter taps adjacent to the first group, ~~and~~
searching for a second group of filter taps associated with a second energy level; and repeating the searching for the first group of filter taps, biasing the group of filter taps adjacent to the first group, and searching for the second group in an iterative manner to adapt the first and second groups of filter taps.

29. (Previously Presented) The method of Claim 28, wherein biasing comprises adjusting an energy level associated with the group of filter taps adjacent to the first group by an additive constant.

30. (Previously Presented) The method of Claim 28, wherein biasing comprises adjusting an energy level associated with the group of filter taps adjacent to the first group by a multiplicative constant.

31. (Previously Presented) The method of Claim 28, further comprising tagging the first group and the group of filter taps adjacent to the first group.

32. (Previously Presented) The method of Claim 31, wherein the second group is not previously tagged.

33. (Previously Presented) The method of Claim 28, wherein the first energy level is greater than the second energy level.

34. (New) The method of Claim 31, wherein the second group has an unequal number of taps compared with the first group.

35. (New) The method of Claim 28, wherein the first energy level has the highest energy level among all filter tap groups.

36. (New) The method of Claim 14, further including separately adjusting speed of convergence of high-energy and low-energy filter tap coefficients.

37. (New) The method of Claim 36, wherein adjusting speed of convergence includes adjusting the speed to be faster or slower to provide trade-offs in steady-state performance.

38. (New) The method of Claim 37, wherein faster convergence results in correspondingly larger steady-state error, and slower convergence results in correspondingly smaller steady-state error.

39. (New) The method of Claim 21, further including separately adjusting speed of convergence of high-energy and low-energy filter tap coefficients.

40. (New) The method of Claim 39, wherein adjusting speed of convergence includes adjusting the speed to be faster or slower to provide trade-offs in steady-state performance.

41. (New) The method of Claim 37, wherein faster convergence results in correspondingly larger steady-state error, and slower convergence results in correspondingly smaller steady-state error.

42. (New) The method of Claim 14, further including transferring the high and low energy filter tap coefficients from an adaptive filter to a non-adaptive filter.

43. (New) The method of 14, wherein the adjustable gain constants are non-binary adjustable gain constants.

44. (New) The method of 21, wherein the adjustable gain constants are non-binary adjustable gain constants.